

## 2006 Area Level Indicator Changes

The Agency for Healthcare Research and Quality (AHRQ) Quality Indicators include area rates that use county-level population estimates as denominators. These population estimates are generated from the publications and data of the U.S. Bureau of the Census, using coding standards and procedures of the federal Office of Management and Budget (OMB). Recent changes in census data and coding procedures required three changes in the setup and operation of the QI syntax.

- First, OMB has defined additional small area entities called “micropolitan” statistical areas that the QI software can now use.
- Second, to reflect the broader range of options now supported, the macro variable “MSALEVL” has been changed to “MALEVL” in the SAS and SPSS software. In the AHRQ QI Windows application, options have been added to the "Select Stratifiers for Use with Area Indicators" screen of the Reports Wizard.
- Third, the year-specific population files provided with the QI syntax have been replaced with a single file containing updated population estimates for the years 1995 through 2006.

### ***Metropolitan and Micropolitan Statistical Areas***

The new micropolitan statistical areas and updated metropolitan statistical areas were established by the federal Office of Management and Budget (OMB) circular 03-04 (last revised December 4, 2005). There are currently 369 metropolitan and 582 micropolitan statistical areas defined. All metropolitan statistical areas combined contain 83% of the U.S. population, while the combined micropolitan statistical areas contain 10% of the U.S. population. Metropolitan statistical areas are defined to include at least one urbanized area of 50,000 population or more, plus adjacent areas that are integral to the urbanized area. Micropolitan statistical areas must include an urbanized area of 10,000 to 49,999 population, plus adjacent integral areas, and include such places as Gillette, Wyoming, Enid, Oklahoma and Gettysburg, Pennsylvania. Users are encouraged to review the criteria for these designations at

<http://www.census.gov/population/www/estimates/metrodef.html>. Metropolitan and micropolitan statistical areas are identified in alphabetical order by a single five-digit code referred to as *Core Based Statistical Area* or *CBSA*. These codes can be found at [http://www.census.gov/population/estimates/metro\\_general/List1.txt](http://www.census.gov/population/estimates/metro_general/List1.txt).

### ***Area Options***

Users now have four options for stratifying area-level indicators, based on the patient's Federal Information Processing Standards (FIPS) State/County code:

- County level with U.S. Census FIPS
- County level with modified FIPS
- Metro Area with OMB 1999 definition
- Metro Area with OMB 2003 definition

The first option assumes that discharge data use Federal Information Processing Standards (FIPS) codes for hospital or patient State and County. (Information on FIPS codes is available at <http://www.itl.nist.gov/fipspubs>.) However, these include codes for 36 independent cities in the state of Virginia, 27 county equivalents (boroughs and census areas) in the state of Alaska, codes for the independent cities of Baltimore City, MD (FIPS code 24510), St. Louis City, MO (29510), and Carson City, NV (32510), and a code (15005) for the Hawaiian Island of Kalawao.

While these are regarded as county equivalents by the Census Bureau, user data may be organized strictly by county and may not conform to this standard. These areas can be combined with their surrounding counties by selecting the second option. Counties were chosen for this option according to the Area Resource File, a national county-level health resources information system maintained by the Health Resources and Services Administration (HRSA) and available for review at <http://www.arfsys.com/main.htm>.

Selecting the third option results in the aggregation of appropriate counties into metropolitan statistical areas (MSA) defined by the federal Office of Management and Budget (OMB) circular 99-04 (last revised May 6, 2002). This is the same aggregation of counties that was provided in previous QI syntax releases.

The fourth option results in aggregation or re-designation of counties into CBSA codes for micropolitan and metropolitan statistical areas described above. When this option is selected, the result for some micropolitan statistical areas will simply be an alternate CBSA code identification, however in some cases adjacent counties will be combined. Most metropolitan statistical areas involve the combination of two or more adjacent counties.

The data element HOSPSTCO has been renamed to PSTCO in the SAS and SPSS software to emphasize the importance of calculating the area QIs by the location of the patient residence. If the user wants to calculate the area QIs based on the population of the Metro Area or county associated with the patient residence, the values for this variable should be the FIPS state/county code associated with each individual patient's place of residence. If the patient information is not available or the user wants to calculate the QIs using the population associated with the hospital location as the denominator, the values for this variable should be the individual hospital FIPS state/county codes.

### ***Selecting an Option in SAS or SPSS***

The "MSALEVL" option in the SAS and SPSS versions of the QI module software previously provided to aggregate appropriate counties into Metropolitan Statistical Areas (MSA) has been broadened, and now appears in the syntax and documentation as "MALEVL". "MALEVL" calls for user input of "0", "1", "2" or "3" instead of "YES" or "NO".

In the software programs, the MALEVL parameter should be set as follows:

- 0-County level with U.S. Census FIPS
- 1-County level with modified FIPS
- 2-Metro Area with OMB 1999 definition
- 3-Metro Area with OMB 2003 definition.

### ***Selecting Options in the AHRQ QI Windows Application***

On the "Select Stratifiers for Use with Area Indicators" screen of the **Reports Wizard**, the user drags one or more of the following options to the "selected stratifiers" column. These are labeled:

- County
- Modified FIPS County Id
- OMB 1999 Metro Area
- OMB 2003 Metro Area
- State

Users should keep in mind that more than one stratifier may be selected, and the order in which stratifiers are selected determines the order in which they are sorted on the final report. It is therefore possible to divide the state of Virginia by metro area or to divide the Washington DC metro area by state.

Two options are relevant on the "Additional Options for Data Analysis" screen. Users may elect to show the numeric FIPS code for each county or metro area, or they may elect to show the name of each area. For state and metro area stratifiers, users may choose to aggregate the entire population of each geographic area, or they may choose to only include the total population of the counties for which there are discharges in the data set. These features are only available in the AHRQ QI Windows Application.

### ***New Population File***

AHRQ Quality Indicators now use a single text file, "POP95TO06.TXT", to contain population estimates used for area rates. Current releases of SAS and SPSS no longer include the "QICTYxx.TXT" and "QICTYAxX.TXT" file series in which the year ("xx") of the data is indicated in the file name that had to be inserted in the user input sections of the syntax. Instead, SAS and SPSS users simply identify the year of data most appropriate to their discharge data by setting the new parameter POPYEAR. Users of the AHRQ QI Windows Application continue to select the appropriate year on the "Select Census Population" screen of the Reports Wizard.

Prevalence data provided with the Prevention Quality Indicators for condition-specific rates will still be provided in the old format and use year-specific file names in the form "QICTYCxx.TXT" for the SAS and SPSS software.

As the file name suggests, "POP95TO06.TXT" includes county-level population estimates for the years 1995 through 2006. Estimates for 1995 through 2004 were developed from total resident population estimates for states and counties, Population Estimates Program, Population Division, U.S. Bureau of the Census (release date August 11, 2005). Estimates for the years 1995 through 1999 are from Census Bureau intercensal population estimates that had been revised to be consistent with the 2000 decennial census. Figures for 2005 and 2006 were developed from bureau population projections.